PCT •

WORLD INTELLECTUAL PROPERTY ORGA International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6:

(11) International Publication Number:

TION

WO 99/61129

B01D 21/01

A1

(43) International Publication Date:

2 December 1999 (02.12.99)

(21) International Application Number:

PCT/US99/10961

(22) International Filing Date:

19 May 1999 (19.05.99)

(30) Priority Data:

PP 3704

25 May 1998 (25.05.98)

ΑU

(71) Applicant (for all designated States except US): NALCO CHEMICAL COMPANY [US/US]; One Nalco Center, Naperville, IL 60563-1198 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): BARHAM, Scott [AU/AU]; 4 McGregor Road, Palmyra, Perth, W.A. 6157 (AU). TIPPETT, James, Morton [AU/AU]; 16E Russell Street, Oatley, NSW 2223 (AU).

(74) Agent: KEEFER, Timothy, J.; Ladas & Parry, 224 S. Michigan Avenue, Chicago, IL 60604 (US).

(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published

With international search report.

(54) Title: DEXTRAN STARCH AND FLOCCULANT COMBINATION FOR IMPROVING RED MUD CLARIFICATION

(57) Abstract

The claimed invention is a method for separating Bayer process red mud from a Bayer process liquor which comprises adding to a Bayer process liquor containing red mud an effective amount of a water soluble synthetic flocculant, dextran and starch combination. The flocculant is added anywhere in the slurry containing the red mud suspended in Bayer process liquor, or in a liquor slurry containing bauxite prior to or during digestion. Once the flocculant combination is added, it is mixed sequentially with the Bayer process liquor and the red mud contained in the Bayer process liquor is removed by sedimentation, centrifugation or filtration.